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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,785	09/15/2003	Simon Berners Hall	1772-000002	9521

28997 7590 12/02/2005

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EXAMINER

WALKER, KEITH D

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

48 68

Office Action Summary	Application No. 10/662,785	Applicant(s) HALL ET AL.	
	Examiner Keith Walker	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 and 41-87 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/15/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Claims 25-40 in the reply filed is acknowledged.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

The information disclosure statements filed have been placed in the application file and the information referred to therein has been considered as to the merits.

Some references cited on the information disclosure statement have been crossed out indicating they have not been considered, except drawings, since a translation of the documents could not be found and was not submitted with the information disclosure statement.

Drawings

The drawings received on September 15, 2003 are acceptable for examination purposes.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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1. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for zinc hydroxide as part of the final composition, does not reasonably provide enablement for only zinc oxide or the inclusion of zinc oxide with the zinc hydroxide in the final composition. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The examples provided all end with at least some zinc hydroxide as part of the final composition. The composition of zinc oxide with either a fatty acid or alkyl sulfonic acid does not appear enabled by the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how the composition would include only zinc oxide with the appropriate acid and it appears that if the final composition did include only zinc oxide with the appropriate acid, the method steps 1-3 would be optional.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,827,494 (Yano) in view of US Patent 4,297,249 (Przybyla).

Yano teaches the process of making an electrode by adding a precipitated zinc hydroxide with a salt of a mineral acid such as zinc sulfate (5:32-47).

Yano does not speak to the use of a fatty acid or graphite in the making of the electrode.

Przybyla teaches adding an alkali metal salt of a fatty acid, including the metal of potassium and a fatty acid of stearic acid, forming potassium stearate (5:26-33).

Graphite is added to the mixture to act as a lubricant (6:65-68). The metal salt of the fatty acid promotes a reduction of oxygen evolution and also acts as a lubricant by lowering the internal friction of the powder.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the electrode mix of Yano with the alkali metal salt of a fatty acid and graphite to aid in the lubrication of the powder as it is formed, which promotes a more consistent and uniform density to the electrode.

4. Claims 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano in view of Przybyla as applied to claim 30 above, and further in view of US Patent 4,146,685 (Tucholski) as evidenced by US Patent 5,688,616 (Yamawaki).

The teachings of Yano and Przybyla as discussed above are incorporated herein.

Yano and Przybyla teach the use of potassium stearate, forming zinc stearate when mixed, as a lubricant in the making of an electrode, but do not discuss the mix ratio or the use of calcium nitrate to make the calcium stearate.

Tucholski also teaches the use of stearates, such as zinc and calcium, as a lubricant or stabilizer and adds the stearates in the amount of about 0.5% (Table 1). Only a minor amount of the stearate is added to mixture to improve the flow and molding of the electrode but not detract from the electrical properties by lowering the density of the active material. Furthermore, it would have been obvious to one having ordinary skill at the time of the invention to vary the amount of the stearate to find the amount needed to promote proper electrode molding and formation, since it is held that discovering an optimum value of a result effective variable involves only routine skill in the art (*MPEP 2144.05*). While Tucholski teaches the use of the calcium stearate, the use of calcium nitrate as a precursor is not taught. As discussed above, Yano teaches using zinc sulfate in the electrode. Yamawaki teaches and gives evidence to the use of calcium nitrate as a substitute salt for the zinc sulfate (7:47-51). It would have been obvious to one skilled in the art at the time of the invention to use the calcium nitrate for the zinc sulfate and with the stearic acid, produce the calcium stearate, since it is held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*MPEP 2144.07*)

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the electrode mixture of Yano and Przybyla

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with the amounts presented in Tucholski to improve the molding and forming of the electrode without diminishing the electrical density of the electrode.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Walker whose telephone number is 571-272-3458. The examiner can normally be reached on Mon. - Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KW


Patrick Ryan
SBR - A 01741